



## **Avian influenza (bird flu)**

### **What is avian influenza (bird flu)?**

Bird flu is an infection caused by avian (bird) influenza (flu) viruses. These flu viruses occur naturally among birds. Wild birds worldwide carry the viruses in their intestines, but usually do not get sick from them. However, bird flu is very contagious among birds and can make some domesticated birds, including chickens, ducks, and turkeys, very sick and kill them.

### **Do bird flu viruses infect humans?**

Bird flu viruses do not usually infect humans, but several cases of human infection with bird flu viruses have occurred since 1997.

### **What are the symptoms of bird flu in humans?**

Symptoms of bird flu in humans have ranged from typical flu-like symptoms (fever, cough, sore throat and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress), and other severe and life-threatening complications.

### **How does bird flu spread?**

Infected birds shed flu virus in their saliva, nasal secretions, and feces. Susceptible birds become infected when they have contact with contaminated excretions or surfaces that are contaminated with excretions. It is believed that most cases of bird flu infection in humans have resulted from contact with infected poultry or contaminated surfaces. The spread of avian influenza viruses from one ill person to another has been reported very rarely, and transmission has not been observed to continue beyond one person.

### **How is bird flu in humans treated?**

Studies done in laboratories suggest that the prescription medicines approved for human flu viruses should work in preventing bird flu infection in humans. However, flu viruses can become resistant to these drugs, so these medications may not always work. Additional studies are needed to prove the effectiveness of these medicines.

### **What is the risk to humans from bird flu?**

The risk from bird flu is generally low to most people because the viruses occur mainly among birds and do not usually infect humans. However, during an outbreak of bird flu among poultry (domesticated chicken, ducks, turkeys), there is a possible risk to people who have contact with infected birds or surfaces that have been contaminated with excretions from infected birds. The current outbreak of avian influenza A (H5N1) among poultry in Asia and Europe (see below) is an example of a bird flu outbreak that has caused human infections and deaths. In such situations, people should avoid contact with infected birds or contaminated surfaces, and should be careful when handling and cooking poultry.



### **What is the bird flu that has been reported in Asia and Europe?**

Outbreaks of avian influenza have occurred among poultry in eight countries in Asia (Cambodia, China, Indonesia, Japan, Laos, South Korea, Thailand, and Vietnam) during late 2003 and early 2004. At that time, more than 100 million birds in the affected countries either died from the disease or were killed in order to try to control the outbreak. By March 2004, the outbreak was reported to be under control. Beginning in late June 2004, however, new outbreaks of avian influenza among poultry were reported by several countries in Asia (Cambodia, China [Tibet], Indonesia, Kazakhstan, Malaysia, Mongolia, Russia [Siberia], Thailand, and Vietnam). It is believed that these outbreaks are ongoing. Most recently, avian influenza has been reported among poultry in Turkey and Romania. Human infections of avian influenza have been reported in Cambodia, Indonesia, Thailand, and Vietnam.

### **What is the risk to humans from the bird flu virus in Asia and Europe?**

Avian influenza does not usually infect humans. In 1997, however, the first case of spread from a bird to a human was seen during an outbreak of bird flu in poultry in Hong Kong, Special Administrative Region. The virus caused severe respiratory illness in 18 people, 6 of whom died. Since that time, there have been other cases of avian influenza infection among humans. Recent human cases of avian influenza infection that have occurred in Cambodia, Thailand, and Vietnam have coincided with large outbreaks in poultry. So far, the spread of avian influenza virus from person to person has been rare and has not continued beyond one person. However, because all influenza viruses have the ability to change, scientists are concerned that avian influenza one day could be able to infect humans and spread easily from one person to another. Because these viruses do not commonly infect humans, there is little or no immune protection against them in the human population.

### **Is there a vaccine to protect humans from avian influenza virus?**

There currently is no commercially available vaccine to protect humans against avian influenza virus that is being seen in Asia and Europe. However, vaccine development efforts are taking place. Research studies to test a vaccine to protect humans against avian influenza virus began in April 2005, and a series of clinical trials is underway. The influenza vaccine that is given each year offers no protection against bird flu.

### **What is the risk to people in the United States from the bird flu outbreak in Asia and Europe?**

The current risk to Americans from the bird flu outbreak in Asia is low. The strain of virus found in Asia and Europe has not been found in the United States. There have been no human cases of avian influenza in the United States. It is possible that travelers returning from affected countries in Asia could be infected if they were exposed to the virus. Since February 2004, medical and public health personnel have been watching closely to find any such cases.